Search Pgm 13

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1805JXB

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2	Apr 08	"Ask CAS" for self-help around the clock
NEWS 3	Apr 09	BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 4	Apr 09	ZDB will be removed from STN
NEWS 5	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS 6	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 7	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS 8	Apr 22	Federal Research in Progress (FEDRIP) now available
NEWS 9	Jun 03	New e-mail delivery for search results now available
NEWS 10	Jun 10	MEDLINE Reload
NEWS 11	Jun 10	PCTFULL has been reloaded
NEWS 12	Jul 02	FOREGE no longer contains STANDARDS file segment
NEWS 13	Jul 22	USAN to be reloaded July 28, 2002; saved answer sets no longer valid
NEWS 14	Jul 29	Enhanced polymer searching in REGISTRY
NEWS 15	Jul 30	NETFIRST to be removed from STN
NEWS 16	Aug 08	CANCERLIT reload
NEWS 17	Aug 08	PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18	Aug 08	NTIS has been reloaded and enhanced
NEWS 19	Aug 19	Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS 20	Aug 19	IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS 21	Aug 19	The MEDLINE file segment of TOXCENTER has been reloaded
NEWS 22	Aug 26	Sequence searching in REGISTRY enhanced
NEWS 23	Sep 03	JAPIO has been reloaded and enhanced
NEWS 24	Sep 16	Experimental properties added to the REGISTRY file
NEWS 25	Sep 16	CA Section Thesaurus available in CAPLUS and CA
NEWS 26	Oct 01	CASREACT Enriched with Reactions from 1907 to 1985
NEWS 27	Oct 21	EVENTLINE has been reloaded
NEWS 28	Oct 24	BEILSTEIN adds new search fields
NEWS 29	Oct 24	Nutraceuticals International (NUTRACEUT) now available on STN
NEWS 30	Oct 25	MEDLINE SDI run of October 8, 2002
NEWS 31	Nov 18	DKILIT has been renamed APOLLIT
NEWS 32	Nov 25	More calculated properties added to REGISTRY
NEWS 33	Dec 02	TIBKAT will be removed from STN
NEWS 34	Dec 04	CSA files on STN
NEWS 35	Dec 17	PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS 36	Dec 17	TOXCENTER enhanced with additional content
NEWS 37	Dec 17	Adis Clinical Trials Insight now available on STN
NEWS 38	Dec 30	ISMEC no longer available
NEWS 39	Jan 13	Indexing added to some pre-1967 records in CA/CAPLUS
NEWS 40	Jan 21	NUTRACEUT offering one free connect hour in February 2003
NEWS 41	Jan 21	PHARMAML offering one free connect hour in February 2003
NEWS 42	Jan 29	Simultaneous left and right truncation added to COMPENDEX, ENERGY, INSPEC

NEWS EXPRESS	January 6 CURRENT WINDOWS VERSION IS V6.01a, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information

NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 14:16:33 ON 11 FEB 2003

=> file .pub
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 0.21 0.21

FILE 'MEDLINE' ENTERED AT 14:17:13 ON 11 FEB 2003

FILE 'BIOSIS' ENTERED AT 14:17:13 ON 11 FEB 2003
COPYRIGHT (C) 2003 BIOLOGICAL ABSTRACTS INC.(R)

=> s crystal? and ige
L1 217 CRYSTAL? AND IGE

=> s l1 and py<2001
L2 188 L1 AND PY<2001

=> duplicate remove l2
DUPLICATE PREFERENCE IS 'MEDLINE, BIOSIS'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n
PROCESSING COMPLETED FOR L2
L3 119 DUPLICATE REMOVE L2 (69 DUPLICATES REMOVED)

=> d 1-10 bib ab

L3 ANSWER 1 OF 119 MEDLINE DUPLICATE 1
AN 2000396717 MEDLINE
DN 20347279 PubMed ID: 10787420
TI **Crystal** structure of the allergen Equ c 1. A dimeric lipocalin with restricted **IgE**-reactive epitopes.
AU Lascombe M B; Gregoire C; Poncet P; Tavares G A; Rosinski-Chupin I; Rabillon J; Goubran-Botros H; Mazie J C; David B; Alzari P M
CS Unite de Biochimie Structurale (CNRS URA 2185), Unite d'Immuno-Allergie, 25 et 28 rue du Docteur Roux, 75724 Paris Cedex 15, France.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, **(2000 Jul 14)** 275 (28) 21572-7.
Journal code: 2985121R. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200008
ED Entered STN: 20000824
Last Updated on STN: 20000824
Entered Medline: 20000816
AB The three-dimensional structure of the major horse allergen Equ c 1 has

been determined at 2.3 A resolution by x-ray **crystallography**. Equ c 1 displays the typical fold of lipocalins, a beta-barrel flanked by a C-terminal alpha-helix. The space between the two beta-sheets of the barrel defines an internal cavity that could serve, as in other lipocalins, for the binding and transport of small hydrophobic ligands. Equ c 1 **crystallizes** in a novel dimeric form, which is distinct from that observed in other lipocalin dimers and corresponds to the functional form of the allergen. Binding studies of point mutants of the allergen with specific monoclonal antibodies raised in mouse and **IgE** serum from horse allergic patients allowed to identify putative B cell antigenic determinants. In addition, total inhibition of **IgE** serum recognition by a single specific monoclonal antibody revealed the restricted nature of the **IgE** binding target on the molecular surface of Equ c 1.

L3 ANSWER 2 OF 119 MEDLINE DUPLICATE 2
AN 2000200464 MEDLINE
DN 20200464 PubMed ID: 10734118
TI Domain one of the high affinity **IgE** receptor, FcepsilonRI, regulates binding to **IgE** through its interface with domain two.
AU Rigby L J; Epa V C; Mackay G A; Hulett M D; Sutton B J; Gould H J; Hogarth P M
CS Helen M. Schutt Laboratory for Immunology, Austin Research Institute, Kronheimer Building, Austin Repatriation Medical Centre, Heidelberg, Victoria, 3084, Australia.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, **(2000 Mar 31)** 275 (13) 9664-72. Journal code: 2985121R. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200005
ED Entered STN: 20000512
Last Updated on STN: 20000512
Entered Medline: 20000504
AB The high affinity receptor for **IgE**, FcepsilonRI, binds **IgE** through the second Ig-like domain of the alpha subunit. The role of the first Ig-like domain is not well understood, but it is required for optimal binding of **IgE** to FcepsilonRI, either through a minor contact interaction or in a supporting structural capacity. The results reported here demonstrate that domain one of FcepsilonRI plays a major structural role supporting the presentation of the ligand-binding site, by interactions generated within the interdomain interface. Analysis of a series of chimeric receptors and point mutants indicated that specific residues within the A' strand of domain one are crucial to the maintenance of the interdomain interface, and **IgE** binding. Mutation of the Arg(15) and Phe(17) residues caused loss in ligand binding, and utilizing a homology model of FcepsilonRI-alpha based on the solved structure of FcgammaRIIa, it appears likely that this decrease is brought about by collapse of the interface and consequently the **IgE**-binding site. In addition discrepancies in results of previous studies using chimeric **IgE** receptors comprising FcepsilonRIalpha with either FcgammaRIIa or FcgammaRIIIA can be explained by the presence or absence of Arg(15) and its influence on the **IgE** -binding site. The data presented here suggest that the second domain of FcepsilonRI-alpha is the only domain involved in direct contact with the **IgE** ligand and that domain one has a structural function of great importance in maintaining the integrity of the interdomain interface and, through it, the ligand-binding site.

L3 ANSWER 3 OF 119 MEDLINE
AN 2001076842 MEDLINE
DN 20540102 PubMed ID: 11086082
TI The role of macrophage inflammatory protein-1 alpha/CCL3 in regulation of

T cell-mediated immunity to Cryptococcus neoformans infection.

AU Olszewski M A; Huffnagle G B; McDonald R A; Lindell D M; Moore B B; Cook D N; Toews G B

CS Veterans Affairs Hospital and Division of Pulmonary and Critical Care Medicine, The University of Michigan Medical School, Ann Arbor, MI 48109, USA.

NC RO1-HL51082 (NHLBI)
RO1-HL63670 (NHLBI)
T32-HL07749 (NHLBI)
+

SO JOURNAL OF IMMUNOLOGY, **(2000 Dec 1)** 165 (11) 6429-36.
Journal code: 2985117R. ISSN: 0022-1767.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Abridged Index Medicus Journals; Priority Journals

EM 200101

ED Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20010111

AB Macrophage inflammatory protein-1alpha (MIP-1alpha/CCL3) is a CC chemokine required for optimal recruitment of leukocytes in response to cryptococcal Ags. MIP-1alpha is expressed in the lungs by day 6 post Cryptococcus neoformans infection and could play a role in the development of cell-mediated immunity. To address this possibility, wild-type (MIP-1alpha(+/+)) mice and MIP-1alpha knockout (MIP-1alpha(-/-)) mice were infected intratracheally with a highly virulent strain of C. neoformans (145A). MIP-1alpha message was detected in the lungs on days 3, 7, and 14 in MIP-1alpha(+/+) mice, but it was undetectable in MIP-1alpha(-/-) mice. On day 16, MIP-1alpha(-/-) mice had a 7-fold increase in C. neoformans burden in the lungs, but no decrease in pulmonary leukocyte recruitment. MIP-1alpha(+/+) and MIP-1alpha(-/-) mice had similar numbers of recruited lymphocytes and monocytes/macrophages. Notably, MIP-1alpha(-/-) mice had a significantly greater number of eosinophils. MIP-1alpha(-/-) mice had extremely high levels of serum **IgE**. This switch of immune response to a T(2) phenotype was associated with enhanced IL-4 and IL-13 expression in the lungs of MIP-1alpha(-/-) mice compared with MIP-1alpha (+/+) mice. Progression of pulmonary cryptococcosis in the presence of nonprotective T(2) immunity resulted in profound lung damage in MIP-1alpha(-/-) mice (eosinophilic **crystal** deposition, destruction of lung parenchyma, and pulmonary hemorrhage). Twelve-week survival was dramatically decreased in MIP-1alpha(-/-) mice. These studies, together with our previous studies, demonstrate that MIP-1alpha plays a role in both the afferent (T(1)/T(2) development) and efferent (T(1)-mediated leukocyte recruitment) phases of cell-mediated immunity to C. neoformans.

L3 ANSWER 4 OF 119 MEDLINE

AN 2000126069 MEDLINE

DN 20126069 PubMed ID: 10657654

TI CCR2 expression determines T1 versus T2 polarization during pulmonary Cryptococcus neoformans infection.

AU Traynor T R; Kuziel W A; Toews G B; Huffnagle G B

CS Pulmonary Division, Department of Internal Medicine, University of Michigan, Ann Arbor, MI 48109, USA.

NC R29-AI38190 (NIAID)
RO1-HL51082 (NHLBI)
RO1-HL63670 (NHLBI)
+

SO JOURNAL OF IMMUNOLOGY, **(2000 Feb 15)** 164 (4) 2021-7.
Journal code: 2985117R. ISSN: 0022-1767.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Abridged Index Medicus Journals; Priority Journals; AIDS
EM 200003
ED Entered STN: 20000320
Last Updated on STN: 20000320
Entered Medline: 20000309

AB Pulmonary clearance of the encapsulated yeast Cryptococcus neoformans requires the development of T1-type immunity. The objective of this study was to determine the role of CCR2 in leukocyte recruitment and development of T1-type cell-mediated immunity during pulmonary C. neoformans infection. Intratracheal inoculation of C. neoformans into CCR2 knockout (CCR2-/-) mice produced a prolonged pulmonary infection (5000-fold CFU at 6 wk compared with CCR2+/+ mice) and significant dissemination to the spleen and brain (160- and 800-fold greater). In addition, CCR2 deficiency resulted in significantly reduced recruitment of macrophages (weeks 1-3) and CD8+ T cells (weeks 1-2) into the lungs. The immune response in CCR2-/- mice was characterized by chronic pulmonary eosinophilia, **crystal** deposition in the lungs, pulmonary leukocyte production of IL-4 and IL-5 but not IFN-gamma, lack of anticryptococcal delayed-type hypersensitivity, and high levels of serum **IgE**. These results demonstrate that expression of CCR2 is required for the development of a T1-type response to C. neoformans infection and lack of CCR2 results in a switch to a T2-type response. Thus, CCR2 plays a critical role in promoting the development of T1- over T2-type immune responses in the lung following cryptococcus infection.

L3 ANSWER 5 OF 119 MEDLINE DUPLICATE 3
AN 2000492455 MEDLINE
DN 20429969 PubMed ID: 10969020
TI Homology modeling and characterization of **IgE** binding epitopes of mountain cedar allergen Jun a 3.
AU Soman K V; Midoro-Horiuti T; Ferreon J C; Goldblum R M; Brooks E G; Kurosky A; Braun W; Schein C H
CS Sealy Center for Structural Biology and Department of Human Biological Chemistry and Genetics, Child Health Research Center, University of Texas Medical Branch, Galveston, Texas 77555-1157 USA.
SO BIOPHYSICAL JOURNAL, **(2000 Sep)** 79 (3) 1601-9.
Journal code: 0370626. ISSN: 0006-3495.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200010
ED Entered STN: 20001027
Last Updated on STN: 20001027
Entered Medline: 20001018

AB The Jun a 3 protein from mountain cedar (Juniperus ashei) pollen, a member of group 5 of the family of plant pathogenesis-related proteins (PR-proteins), reacts with serum **IgE** from patients with cedar hypersensitivity. We used the **crystal** structures of two other proteins of this group, thaumatin and an antifungal protein from tobacco, both approximately 50% identical in sequence to Jun a 3, as templates to build homology models for the allergen. The in-house programs EXDIS and FANTOM were used to extract distance and dihedral angle constraints from the Protein Data Bank files and determine energy-minimized structures. The mean backbone deviations for the energy-refined model structures from either of the templates is <1 A, their conformational energies are low, and their stereochemical properties (determined with PROCHECK) are acceptable. The circular dichroism spectrum of Jun a 3 is consistent with the postulated beta-sheet core. Tryptic fragments of Jun a 3 that reacted with **IgE** from allergic patients all mapped to one helical/loop surface of the models. The Jun a 3 models have features common to aerosol allergens from completely different protein families, suggesting that tertiary structural elements may mediate the triggering of an allergic response.

L3 ANSWER 6 OF 119 MEDLINE
AN 2001291373 MEDLINE
DN 21268346 PubMed ID: 11359634
TI Inhibition of **IgE**-receptor interactions.
AU Sutton B J; Beavil R L; Beavil A J
CS Randall Centre for Molecular Mechanisms of Cell Function, King's College London, New Hunt's House, Guy's Hospital Campus, London Bridge, London SE1 1UL, UK.
SO BRITISH MEDICAL BULLETIN, **(2000)** 56 (4) 1004-18. Ref: 53
Journal code: 0376542. ISSN: 0007-1420.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 200105
ED Entered STN: 20010604
Last Updated on STN: 20010604
Entered Medline: 20010531
AB Immunoglobulin E plays a central role in allergic disease and, as our understanding of the network of interactions between **IgE** and its receptors improves, new opportunities for therapeutic intervention emerge. **IgE** binding to its 'high-affinity' receptor, Fc epsilon RI, first identified on mast cells and now known to be expressed on a variety of other cell types, is the best characterised interaction, and has attracted most attention. The 'low affinity' receptor, Fc epsilon RII/CD23, first found on B-cells, appears to be part of a more complex network that has yet to be fully elucidated. Two recent advances concerning the **IgE** -Fc epsilon RI interaction are noteworthy. The first is the development of a monoclonal anti-**IgE** antibody, now in advanced clinical trials, which inhibits this interaction and certainly proves the viability of this approach. The second is the publication of the **crystal** structure of the complex between **IgE** and Fc epsilon RI, which opens the way for the first structure-based design of small molecule inhibitors.

L3 ANSWER 7 OF 119 MEDLINE DUPLICATE 4
AN 2001193532 MEDLINE
DN 21080851 PubMed ID: 11213224
TI Piezoelectric quartz **crystal** based label-free analysis for allergy disease.
AU Su X; Chew F T; Li S F
CS Institute of Material Research and Engineering, Singapore, Singapore.. xd-su@imre.org.sg
SO BIOSENSORS AND BIOELECTRONICS, **(2000)** 15 (11-12) 629-39.
Journal code: 9001289. ISSN: 0956-5663.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200104
ED Entered STN: 20010410
Last Updated on STN: 20010410
Entered Medline: 20010405
AB This work presents a piezoelectric (Pz) quartz **crystal** based label-free quantification of total **IgE** and allergen-specific **IgE** in human sera for allergy testing. An evaluation of the different brands of **crystals** was first initiated with respect to variability in mass sensitivity, frequency measurement reliability and stability, and surface roughness. Thereafter, for total **IgE** quantification. a direct assay format was adopted. By means of thioctic acid (TA) and coupling reagents, anti-human **IgE** antibodies were immobilized on AT-cut Pz **crystals** (10 MHz). The modified

crystals could detect serum **IgE** directly corresponding to a downward frequency shift. The results showed that silver-coated **crystals** as compared with their gold-coated counterparts provided approximately 1.5 times higher mass detection sensitivity for total **IgE** in the range of 5-300 IU/ml with a linear regression line, y = 1.8957 x + 1.5603, R2 = 0.995. For the detection of allergen-specific **IgE**, a sandwiched assay format was used. As the allergen-modified sensor surface captured various classes of associated antibodies (**IgE**, IgG, etc) and interfering serum proteins as well, the initial frequency shift downwards caused by sera sample incubation would not be proportional to specific **IgE** levels. Thus, following sample incubation, a second incubation step with secondary anti-human **IgE** was added to recognize **IgE** from other bound substances. The frequency shift after secondary antibody binding reflected the amount of allergen-specific **IgE** proportionally. Compared with 10 MHz **crystals**, the 20 MHz counterparts provided approximately four times higher mass detection sensitivity for allergen specific **IgE** in the range of 0.15-17.5 IU/ml with a linear regression line, y = 50.525 x + 107.777, R2 = 0.954. Total **IgE** and allergen specific **IgE** assay results of real patients' sera using the Pz sensors agreed well with those obtained by commercially available test kits with correlation coefficient 0.96-0.98. The possibility of regenerating the quartz **crystals** for further re-use was also dealt with.

L3 ANSWER 8 OF 119 MEDLINE DUPLICATE 5
AN 2000465608 MEDLINE
DN 20471518 PubMed ID: 11021535
TI Structure of the human **IgE**-Fc C epsilon 3-C epsilon 4 reveals conformational flexibility in the antibody effector domains.
AU Wurzburg B A; Garman S C; Jardetzky T S
CS Department of Biochemistry, Molecular Biology, and Cell Biology, Northwestern University, Evanston, Illinois 60208, USA.
SO IMMUNITY, **(2000 Sep)** 13 (3) 375-85.
Journal code: 9432918. ISSN: 1074-7613.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS PDB-1FP5; PDB-1IGT
EM 200010
ED Entered STN: 20001027
Last Updated on STN: 20001027
Entered Medline: 20001018
AB **IgE** antibodies mediate antiparasitic immune responses and the inflammatory reactions of allergy and asthma. We have solved the **crystal** structure of the human **IgE**-Fc Cepsilon3-Cepsilon4 domains to 2.3 A resolution. The structure reveals a large rearrangement of the N-terminal Cepsilon3 domains when compared to related IgG-Fc structures and to the **IgE**-Fc bound to its high-affinity receptor, FcepsilonRI. The **IgE**-Fc adopts a more compact, closed configuration that places the two Cepsilon3 domains in close proximity, decreases the size of the interdomain cavity, and obscures part of the FcepsilonRI binding site. **IgE**-Fc conformational flexibility may be required for interactions with two distinct **IgE** receptors, and the structure suggests strategies for the design of therapeutic compounds for the treatment of **IgE** -mediated diseases.

L3 ANSWER 9 OF 119 MEDLINE DUPLICATE 6
AN 2000388699 MEDLINE
DN 20372189 PubMed ID: 10917521
TI The 3.2-A **crystal** structure of the human IgG1 Fc fragment-Fc gammaRIII complex.
AU Sondermann P; Huber R; Oosthuizen V; Jacob U

CS Max-Planck-Institut fur Biochemie, Martinsried, Germany..
sonderma@biochem.mpg.de
SO NATURE, **(2000 Jul 20)** 406 (6793) 267-73.
Journal code: 0410462. ISSN: 0028-0836.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS PDB-LE4J; PDB-LE4K
EM 200008
ED Entered STN: 20000818
Last Updated on STN: 20001019
Entered Medline: 20000810
AB The immune response depends on the binding of opsonized antigens to cellular Fc receptors and the subsequent initiation of various cellular effector functions of the immune system. Here we describe the **crystal** structures of a soluble Fc gamma receptor (sFc gammaRIII, CD16), an Fc fragment from human IgG1 (hFc1) and their complex. In the 1:1 complex the receptor binds to the two halves of the Fc fragment in contact with residues of the C gamma2 domains and the hinge region. Upon complex formation the angle between the two sFc gammaRIII domains increases significantly and the Fc fragment opens asymmetrically. The high degree of amino acid conservation between sFc gammaRIII and other Fc receptors, and similarly between hFc1 and related immunoglobulins, suggest similar structures and modes of association. Thus the described structure is a model for immune complex recognition and helps to explain the vastly differing affinities of other Fc gammaR-IgG complexes and the Fc epsilonRI alpha-**IgE** complex.

L3 ANSWER 10 OF 119 MEDLINE DUPLICATE 7
AN 2000388698 MEDLINE
DN 20372188 PubMed ID: 10917520
TI Structure of the Fc fragment of human **IgE** bound to its high-affinity receptor Fc epsilonRI alpha.
AU Garman S C; Wurzburg B A; Tarchevskaya S S; Kinet J P; Jardetzky T S
CS Department of Biochemistry, Molecular Biology and Cell Biology, Northwestern University, Evanston, Illinois 60208, USA.
SO NATURE, **(2000 Jul 20)** 406 (6793) 259-66.
Journal code: 0410462. ISSN: 0028-0836.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS PDB-1F6A
EM 200008
ED Entered STN: 20000818
Last Updated on STN: 20000818
Entered Medline: 20000810
AB The initiation of immunoglobulin-E (**IgE**)-mediated allergic responses requires the binding of **IgE** antibody to its high-affinity receptor, Fc epsilonRI. Crosslinking of Fc epsilonRI initiates an intracellular signal transduction cascade that triggers the release of mediators of the allergic response. The interaction of the **crystallizable** fragment (Fc) of **IgE** (**IgE**-Fc) with Fc epsilonRI is a key recognition event of this process and involves the extracellular domains of the Fc epsilonRI alpha-chain. To understand the structural basis for this interaction, we have solved the **crystal** structure of the human **IgE**-Fc-Fc epsilonRI alpha complex to 3.5-A resolution. The **crystal** structure reveals that one receptor binds one dimeric **IgE**-Fc molecule asymmetrically through interactions at two sites, each involving one C epsilon3 domain of the **IgE**-Fc. The interaction of one receptor with the **IgE** -Fc blocks the binding of a second receptor, and features of this interaction are conserved in other members of the Fc receptor family. The

structure suggests new approaches to inhibiting the binding of **IgE** to Fc epsilonRI for the treatment of allergy and asthma.

=> d 11-20 bib ab

L3 ANSWER 11 OF 119 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2000:137684 BIOSIS
DN PREV200000137684
TI Expression of recombinant imported fire ant venom allergen Sol i 3.
AU Schmidt, Margit (1); McConnell, Thomas J. (1); Hoffman, Donald R. (1)
CS (1) East Carolina University, Greenville, NC USA
SO Journal of Allergy and Clinical Immunology., (**Jan., 2000**) Vol. 105, No. 1 part 2, pp. S57.
Meeting Info.: 56th Annual Meeting of the American Academy of Allergy, Asthma and Immunology. San Diego, California, USA March 03-08, 2000 American Academy of Allergy, Asthma and Immunology
. ISSN: 0091-6749.
DT Conference
LA English
SL English

L3 ANSWER 12 OF 119 MEDLINE
AN 1999107890 MEDLINE
DN 99107890 PubMed ID: 9891000
TI Probing the molecular basis of allergy. three-dimensional structure of the bovine lipocalin allergen Bos d 2.
AU Rouvinen J; Rautiainen J; Virtanen T; Zeiler T; Kauppinen J; Taivainen A; Mantyjarvi R
CS Department of Chemistry, University of Joensuu, POB 111, FIN-80101 Joensuu, Finland.. juha.rouvinen@joensuu.fi
SO JOURNAL OF BIOLOGICAL CHEMISTRY, **(1999 Jan 22)** 274 (4) 2337-43.
Journal code: 2985121R. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS PDB-1BJ7
EM 199902
ED Entered STN: 19990301
Last Updated on STN: 20000303
Entered Medline: 19990216
AB The three-dimensional structure of the major bovine allergen Bos d 2 has been determined by using x-ray diffraction at 1.8-A resolution. Structurally Bos d 2 is a member of the lipocalin family comprising proteins with transport functions. There is a flat small cavity inside the Bos d 2 protein core suitable for ligand binding, and it is possible that Glu115 and Asn37 inside the core are able to make hydrogen bonds with the ligand. Many allergens from different animals belong to the lipocalin family. The amino acid residue similarities between these lipocalins indicate putative regions for **IgE** binding. Comparison with the available allergen structures from other sources suggests that these allergens are roughly the same size and that their shape is more spherical than elliptical.

L3 ANSWER 13 OF 119 MEDLINE DUPLICATE 8
AN 2000133109 MEDLINE
DN 20133109 PubMed ID: 10666582
TI **Crystallization** and preliminary X-ray analysis of birch-pollen allergen Bet v 1 in complex with a murine monoclonal IgG Fab' fragment.
AU Spangfort M D; Mirza O; Svensson L A; Larsen J N; Gajhede M; Ipsen H
CS Biochemical Allergy Research, ALK-Abello, Boge Alle 6-8, DK-2970 Horsholm, Denmark.. michaels@inet.uni2.dk
SO ACTA CRYSTALLOGRAPHICA. SECTION D: BIOLOGICAL CRYSTALLOGRAPHY, **(1999**

Dec) 55 (Pt 12) 2035-6.
Journal code: 9305878. ISSN: 0907-4449.
CY Denmark
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200003
ED Entered STN: 20000330
Last Updated on STN: 20000330
Entered Medline: 20000317
AB The human type I allergic response is characterized by the presence of allergen-specific serum immunoglobulin E (**IgE**). Allergen-mediated cross-linking of receptor-bound **IgE** on the surface of mast cells and circulating basophils triggers the release of mediators, resulting in the development of the clinical symptoms of allergy. In order to study the structural basis of allergen-antibody interaction, a complex between the major birch-pollen allergen Bet v 1 and a Fab' fragment isolated from the murine monoclonal Bet v 1 antibody BV16 has been **crystallized**. Complex **crystals** belong to space group P1, with unit-cell parameters a = 91.65, b = 99.14, c = 108.90 A, alpha = 105.7, beta = 98.32, gamma = 97.62 degrees, and diffract to 2.9 A resolution when analyzed at 100 K using synchrotron-generated X--rays.

L3 ANSWER 14 OF 119 MEDLINE
AN 1999286831 MEDLINE
DN 99286831 PubMed ID: 10358779
TI The **crystal** structure of the human high-affinity **IgE** receptor (Fc epsilon RI alpha).
AU Garman S C; Kinet J P; Jardetzky T S
CS Department of Biochemistry, Molecular Biology, and Cell Biology, Northwestern University, Evanston, Illinois 60208, USA.
SO ANNUAL REVIEW OF IMMUNOLOGY, **(1999)** 17 973-6. Ref: 15
Journal code: 8309206. ISSN: 0732-0582.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199908
ED Entered STN: 19990913
Last Updated on STN: 19990913
Entered Medline: 19990831

L3 ANSWER 15 OF 119 MEDLINE DUPLICATE 9
AN 1999190980 MEDLINE
DN 99190980 PubMed ID: 10089322
TI **Crystallization** and preliminary **crystallographic** analysis of the major horse allergen Equ c 1.
AU Gregoire C; Tavares G A; Lorenzo H K; Dandeu J P; David B; Alzari P M
CS Unite d'Immuno-Allergie, Institut Pasteur, 25 Rue du Dr Roux, 75724 Paris CEDEX 15, France.
SO ACTA CRYSTALLOGRAPHICA. SECTION D: BIOLOGICAL CRYSTALLOGRAPHY, **(1999 Apr)** 55 (Pt 4) 880-2.
Journal code: 9305878. ISSN: 0907-4449.
CY Denmark
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199905
ED Entered STN: 19990601
Last Updated on STN: 19990601
Entered Medline: 19990517
AB The secreted protein Equ c 1 is the major component responsible for the

induction of specific **IgE** antibodies in patients sensitized to horse allergens. Equ c 1 belongs to the lipocalin superfamily of hydrophobic ligand-binding proteins, which also includes other known allergens. Equilibrium sedimentation and gel-filtration studies demonstrate that both the glycosylated form of Equ c 1 purified from horse salivary glands and the non-glycosylated recombinant form expressed in bacteria exist predominantly as dimers in solution. As observed for other dimeric lipocalins, acidic pH and low protein concentration favour dimer dissociation. The recombinant form of Equ c 1 has been **crystallized** using ammonium sulfate as a precipitant. The **crystals** belong to the tetragonal space group P41212 with cell parameters a = b = 84.0, c = 56.1 A, and contain a single molecule in the asymmetric unit. A complete data set from native **crystals** was collected at the synchrotron source in Hamburg to 2.9 A resolution using a frozen **crystal**, and structure determination is in progress.

L3 ANSWER 16 OF 119 MEDLINE DUPLICATE 10
AN 1999228378 MEDLINE
DN 99228378 PubMed ID: 10213364
TI The effect of formulation excipients on protein stability and aerosol performance of spray-dried powders of a recombinant humanized anti-**IgE** monoclonal antibody.
AU Andya J D; Maa Y F; Costantino H R; Nguyen P A; Dasovich N; Sweeney T D; Hsu C C; Shire S J
CS Pharmaceutical Research and Development, Genentech, Inc., South San Francisco, California 94080, USA.. andya.jim@gene.com
SO PHARMACEUTICAL RESEARCH, **(1999 Mar)** 16 (3) 350-8.
Journal code: 8406521. ISSN: 0724-8741.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199906
ED Entered STN: 19990714
Last Updated on STN: 19990714
Entered Medline: 19990625
AB PURPOSE: To study the effect of trehalose, lactose, and mannitol on the biochemical stability and aerosol performance of spray-dried powders of an anti-**IgE** humanized monoclonal antibody. METHODS: Protein aggregation of spray-dried powders stored at various temperature and relative humidity conditions was assayed by size exclusion chromatography and sodium dodecyl sulfate polyacrylamide gel electrophoresis. Protein glycation was determined by isoelectric focusing and affinity chromatography. **Crystallization** was examined by X-ray powder diffraction. Aerosol performance was assessed as the fine particle fraction (FPF) of the powders blended with coarse carrier lactose, and was determined using a multiple stage liquid impinger. RESULTS: Soluble protein aggregation consisting of non-covalent and disulfide-linked covalent dimers and trimers occurred during storage. Aggregate was minimized by formulation with trehalose at or above a molar ratio in the range of 300: 1 to 500:1 (excipient:protein). However, the powders were excessively cohesive and unsuitable for aerosol administration. Lactose had a similar stabilizing effect, and the powders exhibited acceptable aerosol performance, but protein glycation was observed during storage. The addition of mannitol also reduced aggregation, while maintaining the FPF, but only up to a molar ratio of 200:1. Further increased mannitol resulted in **crystallization**, which had a detrimental effect on protein stability and aerosol performance. CONCLUSIONS: Protein stability was improved by formulation with carbohydrate. However, a balance must be achieved between the addition of enough stabilizer to improve protein biochemical stability without compromising blended powder aerosol performance.

L3 ANSWER 17 OF 119 MEDLINE DUPLICATE 11

AN 1999200083 MEDLINE
DN 99200083 PubMed ID: 10100310
TI Protein inhalation powders: spray drying vs spray freeze drying.
AU Maa Y F; Nguyen P A; Sweeney T; Shire S J; Hsu C C
CS Genentech, Inc., South San Francisco, California 94080, USA..
yuh-fun_maa@powderject.com
SO PHARMACEUTICAL RESEARCH, **(1999 Feb)** 16 (2) 249-54.
Journal code: 8406521. ISSN: 0724-8741.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199905
ED Entered STN: 19990607
Last Updated on STN: 19990607
Entered Medline: 19990526
AB PURPOSE: To develop a new technique, spray freeze drying, for preparing protein aerosol powders. Also, to compare the spray freeze-dried powders with spray-dried powders in terms of physical properties and aerosol performance. METHODS: Protein powders were characterized using particle size analysis, thermogravimetric analysis, scanning electron microscopy, X-ray powder diffractometry, and specific surface area measurement. Aerosol performance of the powders was evaluated after blending with lactose carriers using a multi-stage liquid impinger or an Anderson cascade impactor. Two recombinant therapeutic proteins currently used for treating respiratory tract-related diseases, deoxyribonuclase (rhDNase) and anti-**IgE** monoclonal antibody (anti-**IgE** MAb), were employed and formulated with different carbohydrate excipients. RESULTS: Through the same atomization but the different drying process, spray drying (SD) produced small (approximately 3 microns), dense particles, but SFD resulted in large (approximately 8-10 microns), porous particles. The fine particle fraction (FPF) of the spray freeze-dried powder was significantly better than that of the spray-dried powder, attributed to better aerodynamic properties. Powders collected from different stages of the cascade impactor were characterized, which confirmed the concept of aerodynamic particle size. Protein formulation played a major role in affecting the powder's aerosol performance, especially for the carbohydrate excipient of a high **crystallization** tendency. CONCLUSIONS: Spray freeze drying, as opposed to spray drying, produced protein particles with light and porous characteristics, which offered powders with superior aerosol performance due to favorable aerodynamic properties.

L3 ANSWER 18 OF 119 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1999:399421 BIOSIS
DN PREV199900399421
TI Evaluation of allergenicity of egg yolk immunoglobulin Y and other egg proteins by passive cutaneous anaphylaxis.
AU Akita, E. M. (1); Jang, C. B.; Kitts, D. D.; Nakai, S.
CS (1) Food, Nutrition and Health, Faculty of Agricultural Sciences, University of British Columbia, 6650 N. W. Marine Drive, Vancouver, BC, V6T 1Z4 Canada
SO Food and Agricultural Immunology, (**June, 1999**) Vol. 11, No. 2, pp. 191-201.
ISSN: 0954-0105.
DT Article
LA English
SL English
AB The allergenicity of egg yolk immunoglobulin (IgY) was studied using passive cutaneous anaphylaxis. It was observed that the intact yolk, water soluble fraction of the yolk, whole IgY molecule or its antigen binding (Fab') and **crystallizable** (pFc') fragments produced by pepsin digestion, elicited low **IgE** antibody response in mice when compared to egg white, a known allergen. The pFc' fragment of IgY was more

antigenic than the Fab' fragment as determined by ELISA. Low cross-reactivity was also observed between the egg yolk proteins and egg white antibodies. The low **IgE** antibody response to the egg yolk proteins was associated with a higher suppressor T-lymphocytes or lower helper T-lymphocytes, or both, in comparison to egg white derived lymphocytes.

L3 ANSWER 19 OF 119 MEDLINE DUPLICATE 12
AN 2000014681 MEDLINE
DN 20014681 PubMed ID: 10545766
TI Murine allergic respiratory responses to the major house dust mite allergen Der p 1.
AU Clarke A H; Thomas W R; Rolland J M; Dow C; O'Brien R M
CS Medicine and Pathology, Western Hospital Footscray, Perth, Australia.
SO INTERNATIONAL ARCHIVES OF ALLERGY AND IMMUNOLOGY, **(1999 Oct)** 120 (2) 126-34.
Journal code: 9211652. ISSN: 1018-2438.
CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199912
ED Entered STN: 20000113
Last Updated on STN: 20000113
Entered Medline: 19991228
AB BACKGROUND: Although many studies have examined chronic asthma, limited data exist on acute immunopathogenic events induced by allergens. The aim of the study was to investigate the acute cellular, serologic and histopathologic events in airway inflammation produced by intranasal challenge of mice sensitised to the major house dust mite allergen Der p 1. METHODS: C57BL/6 mice were immunised subcutaneously with Der p 1 in alum. Mice were bled and challenged intranasally with Der p 1 on day 14 and killed on day 17. Lungs were fixed in situ, processed and stained with haematoxylin and eosin. The degree of inflammation and eosinophil infiltration was quantified by image analysis. Specific **IgE** was determined by passive cutaneous anaphylaxis. Cells from spleen and draining lymph nodes were cultured for 24 h with Der p 1, and IL-3/GM-CSF released into supernatants was measured by bioassay. RESULTS: Intranasal challenge of sensitised mice induced eosinophilic influx into the large and small airways and the alveolar regions of the lung, mucus plugging and in severe cases numerous Charcot-Leyden **crystals**. The quantitation of the inflammation induced by different sensitisation and challenge doses showed that optimal inflammation could be produced using only 1 microg of allergen for both sensitisation and challenge. The degree of inflammation was not related to the titre of **IgE** antibody and was indeed produced in its absence. T cell reactivity of spleen cells to the allergen was decreased suggesting cell migration or inactivation. CONCLUSIONS: Mice sensitised and challenged intranasally with as little as 1 microg of Der p 1 produced an extensive pulmonary eosinophilic inflammation which shared many of the features of the inflammation found in asthma. The small amount of allergens required and the use of intranasal challenge should provide a useful model.

L3 ANSWER 20 OF 119 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1999:134467 BIOSIS
DN PREV199900134467
TI **IgE**-Binding epitopes of birch pollen allergen Bet v 1 revealed by X-ray **crystallography** and site-directed mutagenesis.
AU Spangfort, M. D.; Mirza, O.; Gajhede, M.; Larsen, J. N.; Van Neerven, J. J. R.; Ipsen, H.; Schou, C.
CS Horsholm Denmark
SO Journal of Allergy and Clinical Immunology, (**Jan., 1999**) Vol. 103, No. 1 PART 2, pp. S122.
Meeting Info.: 55th Annual Meeting of the American Academy of Allergy,

Asthma and Immunology Orlando, Florida, USA February 26-March 3, 1999
American Academy of Allergy, Asthma, and Immunology
. ISSN: 0091-6749.
DT Conference
LA English

=> d his

(FILE 'HOME' ENTERED AT 14:16:33 ON 11 FEB 2003)

FILE 'MEDLINE, BIOSIS' ENTERED AT 14:17:13 ON 11 FEB 2003
L1 217 S CRYSTAL? AND IGE
L2 188 S L1 AND PY<2001
L3 119 DUPLICATE REMOVE L2 (69 DUPLICATES REMOVED)

=> s (crystal? or structure) (3a) ige
L4 224 (CRYSTAL? OR STRUCTURE) (3A) IGE

=> s l4 and py<2000
L5 172 L4 AND PY<2000

=> duplicate remove l5
DUPLICATE PREFERENCE IS 'MEDLINE, BIOSIS'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n
PROCESSING COMPLETED FOR L5
L6 105 DUPLICATE REMOVE L5 (67 DUPLICATES REMOVED)

=> d 1-10 bib aB

L6 ANSWER 1 OF 105 MEDLINE DUPLICATE 1
AN 1999262566 MEDLINE
DN 99262566 PubMed ID: 10329832
TI Pharmacologic regulation of histamine release by the human recombinant histamine-releasing factor.
AU Bheekha-Escura R; Chance S R; Langdon J M; MacGlashan D W Jr; MacDonald S M
CS Johns Hopkins Asthma and Allergy Center, Baltimore, MD 21224, USA.
NC AI 20253 (NIAID)
R0-1 AI 32651 (NIAID)
SO JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY, **(1999 May)** 103 (5 Pt 1) 937-43.
Journal code: 1275002. ISSN: 0091-6749.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199906
ED Entered STN: 19990618
Last Updated on STN: 20021218
Entered Medline: 19990608
AB BACKGROUND: The recently cloned human recombinant IgE-dependent histamine releasing factor (HrHRF) was initially thought to stimulate histamine release from human basophils from a subpopulation of allergic donors by interacting with the IgE molecules on the surface of these cells. Additional data suggest that HrHRF exerts its biologic effects by binding to a distinct cell surface **structure** and not to **IgE**.
OBJECTIVE: To address the hypothesis that the HrHRF signaling pathway is distinct from the classical high-affinity IgE receptor (FcepsilonRI) pathway, we used pharmacologic agents known to affect basophil histamine release. METHODS: In this report we compared the effect of staurosporine, Bis II, Go 6976, rottlerin, and pertussis toxin on histamine release from human basophils mediated by the following stimuli: HrHRF, polyclonal human anti-IgE antibody, and antigen, as well as the IgE-independent stimulus,

FMLP. RESULTS: None of these modulators, except rottlerin, could differentiate histamine release induced by anti-IgE or antigen from that induced by HrHRF. Rottlerin enhanced HrHRF-mediated histamine release and dose dependently blocked FMLP-mediated release without affecting basophil activation by either anti-IgE or antigen. CONCLUSION: These data suggest a unique signaling pathway for HrHRF and thus strengthen the hypothesis that HrHRF binds to a specific receptor other than IgE.

L6 ANSWER 2 OF 105 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2000:106703 BIOSIS
DN PREV200000106703
TI Latex allergy.
AU Frankland, A. W. (1)
CS (1) The London Allergy Clinic, 66 New Cavendish Street, London, W1M 7LD UK
SO Journal of Nutritional & Environmental Medicine (Abingdon), (**Dec., 1999**) Vol. 9, No. 4, pp. 313-321.
ISSN: 1359-0847.
DT General Review
LA English
SL English
AB Allergy to natural rubber latex (NRL) has recently been recognized as an increasing clinical problem, not only among health care workers but also with atopic children, and especially spina bifida repeatedly operated on children. The latex contaminated cornstarch glove powder acts as a latex aeroallergen in operating theatres. Bananas, avocado pears and chestnuts may cause anaphylaxis in the latex fruit syndrome. There are over twelve allergens in NRL and the **structure** of the immunoglobulin (**IgE**) binding proteins present in NRL differ in various patient groups. Skin prick tests are the easiest way to establish a diagnosis of latex sensitivity. They are more reliable than immunological methods but may cause anaphylaxis. Ficus benjamina is used increasingly for indoor decoration and this cross-reacts with Hevea brasiliensis. Latex specific IgE from type fragments are abundant in the urban air.

L6 ANSWER 3 OF 105 MEDLINE DUPLICATE 2
AN 1999330281 MEDLINE
DN 99330281 PubMed ID: 10403487
TI N-glycosylation influences epitope expression and receptor binding **structures** in human **IgE**.
AU Bjorklund J E; Karlsson T; Magnusson C G
CS Department of Laboratory Medicine, Karolinska Institute, Stockholm, Sweden.
SO MOLECULAR IMMUNOLOGY, **(1999 Feb)** 36 (3) 213-21.
Journal code: 7905289. ISSN: 0161-5890.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199907
ED Entered STN: 19990730
Last Updated on STN: 19990730
Entered Medline: 19990720
AB Although human IgE is relatively rich in carbohydrates, there are few studies concerning their structural and functional importance. The low serum concentration of IgE has limited carbohydrate characterisation to a few IgE myeloma proteins. Four to six of the seven potential N-glycosylation sites in the constant region of the epsilon chain seem occupied together with some residual microheterogeneity. We have used a panel of 28 anti-Cepsilon2, 7 anti-Cepsilon3 and 18 anti-Cepsilon4 domain-specific anti-IgE mAbs, and rFcepsilonRIalpha to examine the effect of N-glycosylation on epitope expression of human IgE. Myeloma proteins IgE(DES)-kappa, IgE(ND)-lambda and IgE(UD)-kappa as well as polyclonal IgE were deglycosylated with PNGF and/or sialidase and tested in different ELISA. In all ELISA approaches, the reactivity of most domain-specific

anti-IgE mAbs was independent of the glycosylation state of IgE(DES), except for one-third of the anti-Cepsilon2 mAbs. These mAbs reacted better with deglycosylated IgE(DES) in the order of treatment PNGF/sialidase > PNGF > or = sialidase > buffer control. In sharp contrast, the reactivity of IgE(DES) with rFcepsilonRIalpha was not influenced by sialidase but markedly reduced following PNGF or PNGF/sialidase treatment. These findings were neither myeloma restricted nor caused by aggregation, since monomeric IgE demonstrated the same reactivity pattern. Thus. N-glycosylation seems to influence both structure and function of human IgE. The oligosaccharides modulate epitope expression, mainly in the Cepsilon2-domain, as revealed by a subset of mAbs. They also promote subtle changes in the Cepsilon3-domain, leading to a reduced FcepsilonRIalpha binding. These findings suggest physiological implications of carbohydrates in human IgE.

L6 ANSWER 4 OF 105 MEDLINE DUPLICATE 3
AN 1999432437 MEDLINE
DN 99432437 PubMed ID: 10502033
TI Pollen-related food allergy: cloning and immunological analysis of isoforms and mutants of Mal d 1, the major apple allergen, and Bet v 1, the major birch pollen allergen.
AU Son D Y; Scheurer S; Hoffmann A; Haustein D; Vieths S
CS Paul-Ehrlich-Institut, Department of Allergology, Paul-Ehrlich-Str. 51-59, D.-63225 Langen, Germany.
SO EUROPEAN JOURNAL OF NUTRITION, **(1999 Aug)** 38 (4) 201-15.
Journal code: 100888704. ISSN: 1436-6207.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199911
ED Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991112
AB BACKGROUND: Mal d 1, the major apple allergen, cross-reacts with IgE specific for the major birch pollen allergen, Bet v 1, and is responsible for birch pollen related food allergy to apple. Isoforms of Bet v 1 showing minor sequence variations display different binding capacity for specific IgE antibodies from allergic patients. Moreover, strain-dependent variation of allergenicity has been reported for apples. OBJECTIVE: To investigate the occurrence of strain-dependent isoforms of Mal d 1 which may differ in their allergenic potential, to obtain data on structures essential for binding of Mal d 1 to the antibody, and to gain insights into the **structures** responsible for its **IgE** cross-reactivity to Bet v 1. METHODS: The cDNA of Mal d 1 from various apple strains was amplified by a PCR strategy based on conserved regions of known Mal d 1-sequences, and sequenced. Two major isoforms of Mal d 1 were expressed as recombinant proteins and purified, as were different variants of the major birch pollen allergen, Bet v 1. Together with already existing recombinant birch pollen and apple allergens, these were subjected to allergenicity testing by IgE-immunoblotting, enzyme allergo sorbent test and dose related mediator release. "Hot-spots" for IgE-reactivity were identified by site-directed mutagenesis. RESULTS: Twelve Mal d 1-clones were sequenced from 7 apple varieties and compared to 3 known Mal d 1 sequences. The clones were clustered into two groups, each showing a high degree of sequence identity to one of the known sequences and specific differences to the third sequence. No strain-specific sequences were identified. In contrast, apple strains with reported differences in allergenicity showed different expression levels of the major allergen. Immunologic testing of recombinant allergens revealed high IgE binding capacity of 2 major isoforms, named GD26 and GS29, with a slightly higher IgE binding capacity of GD26. Moreover, the allergenicity was similar to another r Mal d 1 reported in the literature, representing the isoform divergent from our clones. Mutational analysis of

our Mal d 1 allergens identified serine in position 111 as essential for IgE binding. Allergenicity was almost depleted by changing this residue into a proline. Moreover, the corresponding serine residue, present in position 112 of Bet v 1, was in a similar manner crucial for the allergenicity of the birch pollen allergen. CONCLUSION: We conclude that divergent allergenicity of apple strains mainly depends on different expression levels of the major allergen. Introduction of a proline residue in position 111 of Mal d 1 and in position 112 of Bet v 1 led to a drastic reduction of allergenicity of both the pollen and the food allergen, obviously also removing the cross-reactive epitope. Mutants with reduced IgE-reactivity but maintained T-cell reactivity may represent new candidates for a safer specific immunotherapy with reduced side-effects.

L6 ANSWER 5 OF 105 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1999:400820 BIOSIS
DN PREV199900400820
TI Immunological IgE cross-reactions of bovine and human alpha-lactalbumins in cow's milk allergic patients.
AU Maynard, Francoise; Chatel, Jean-Marc; Wal, Jean-Michel (1)
CS (1) Laboratoire d'Immuno-allergie alimentaire, Service de Pharmacologie et d'Immunologie, CEA-INRA, CEA SACLAY, 91191, Gif-sur-Yvette Cedex France
SO Food and Agricultural Immunology, (**June, 1999**) Vol. 11, No. 2, pp. 179-189.
ISSN: 0954-0105.
DT Article
LA English
SL English
AB Despite great homology with the equivalent human protein, bovine alpha-lactalbumin (B alpha-La), a major component of whey, has been identified as a major milk allergen. The aim of this study was to investigate the relationship between **structure** and **IgE** binding capacity in alpha-Las: (1) the importance of three-dimensional structure using native vs disulfide bridge-reduced B alpha-La; and (2) the incidence of amino acid sequence divergence on specific IgE cross-reactivity to human vs bovine alpha-La. Purified native, reduced and S-carboxymethylated B alpha-La and human alpha-La (H alpha-LA) were prepared. Specific IgE of 20 sera from patients with clinically recognized cow's milk protein allergy and positive RAST(R) tests to B alpha-La were measured in original direct and competitive ELISA inhibition tests. All sera containing specific anti-native B alpha-La IgE also reacted with denatured protein, but the IgE levels were generally lower, showing that three-dimensional structure is an important feature in B alpha-La allergenicity but that sequential epitopes are also exposed after protein denaturation. Despite lower IgE levels, all sera also gave significant IgE responses to H alpha-La. Competitive ELISA inhibition confirmed results obtained by direct ELISA. The demonstrated IgE cross-reactivity between B alpha-LA and H alpha-La could be related to the high degree of sequence homology between the two proteins but did not prove to have a clinical significance. However, it is of great interest for a study of the relationship between **structure**, **IgE** binding capacity and allergenicity in alpha-Las.

L6 ANSWER 6 OF 105 MEDLINE
AN 1999242411 MEDLINE
DN 99242411 PubMed ID: 10224356
TI Mimotope and anti-idiotypic vaccines to induce an anti-IgE response.
AU Stadler B M; Zurcher A W; Miescher S; Kricek F; Vogel M
CS Institute of Immunology and Allergology, Inselspital, University of Bern, Switzerland.. beda.stadler@insel.ch
SO INTERNATIONAL ARCHIVES OF ALLERGY AND IMMUNOLOGY, **(1999 Feb-Apr)** 118 (2-4) 119-21.
Journal code: 9211652. ISSN: 1018-2438.
CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)

LA English
FS Priority Journals
EM 199906
ED Entered STN: 19990618
Last Updated on STN: 19990618
Entered Medline: 19990610
AB We have defined epitopes on human IgE by screening different phage display random peptide libraries with a monoclonal anti-IgE antibody termed BSW17. The selected mimotopes and epitopes within the Cepsilon3 and Cepsilon4 region of IgE induced antibodies that were nonanaphylactogenic and had biological activity similar to BSW17. The chemically synthesized and KLH-coupled IgE epitopes or mimotopes were used to induce an anti-IgE response in rhesus monkeys. The immunized rhesus monkeys were subsequently protected in a PCA test when sensitized with human IgE and triggered with the corresponding allergen. Furthermore, using the same monoclonal anti-IgE antibody, we also generated an anti-idiotypic antibody that showed sequence homology with the IgE epitope in the Cepsilon3 domain. This anti-idiotypic antibody as well as the mimotopes were then used in a mouse model to induce orally an anti-IgE immune response. For this purpose mice were fed by intragastric gavages with bacteriophages displaying the small **IgE**-homologous **structures**. Orally immunized mice produced serum anti-IgE antibodies that were inhibited by BSW17 suggesting that it may be possible to induce a systemic anti-IgE response orally.

L6 ANSWER 7 OF 105 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1999:134462 BIOSIS
DN PREV199900134462
TI Modulation of the allergenicity of a major peanut allergen, Ara h 2 by mutagenesis of its immunodominant IgE binding epitopes.
AU King, N. (1); Maleki, S. J.; Sampson, H.; Burks, A. W. (1); Bannon, G. A. (1)
CS (1) Univ. Arkansas Med. Sci., Little Rock, AR 72201 USA
SO Journal of Allergy and Clinical Immunology, (**Jan., 1999**) Vol. 103, No. 1 PART 2, pp. S67.
Meeting Info.: 55th Annual Meeting of the American Academy of Allergy, Asthma and Immunology Orlando, Florida, USA February 26-March 3, 1999 American Academy of Allergy, Asthma, and Immunology
. ISSN: 0091-6749.
DT Conference
LA English

L6 ANSWER 8 OF 105 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1999:188087 BIOSIS
DN PREV199900188087
TI Membrane **structure** and dynamics in **IgE** receptor signaling.
AU Baird, B. (1); Sheets, E. (1); Holowka, D. (1)
CS (1) Department of Chemistry and Chemical Biology, Cornell University, Ithaca, NY, 14853-1301 USA
SO Biophysical Journal, (**Jan., 1999**) Vol. 76, No. 1 PART 2, pp. A31-A31.
Meeting Info.: Forty-third Annual Meeting of the Biophysical Society Baltimore, Maryland, USA February 13-17, 1999
ISSN: 0006-3495.
DT Conference
LA English

L6 ANSWER 9 OF 105 MEDLINE DUPLICATE 4
AN 2000002214 MEDLINE
DN 20002214 PubMed ID: 10529586
TI Involvement of carbohydrate epitopes in the IgE response of celery-allergic patients.
AU Fotisch K; Altmann F; Haustein D; Vieths S
CS Department of Allergology, Paul-Ehrlich-Institute, Langen, Germany.

SO INTERNATIONAL ARCHIVES OF ALLERGY AND IMMUNOLOGY, **(1999 Sep)** 120 (1) 30-42.
Journal code: 9211652. ISSN: 1018-2438.
CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199911
ED Entered STN: 20000113
Last Updated on STN: 20000113
Entered Medline: 19991126
AB BACKGROUND: This study was performed to get further insights into antibody responses to cross-reactive carbohydrate determinants (CCD), including initial experiments to prove the biological activity of anti-CCD IgE. Earlier studies have shown that IgE specific for CCD occurs in about 25% of celery-allergic patients. The clinical significance of these antibody specificities is doubtful. METHODS: Patient sera were selected on the basis of a positive case history of celery allergy and multiple binding to high molecular weight celery allergens on immunoblots. Specific IgE to native and heated celery tuber was determined by the enzyme allergosorbent test (EAST). N-glycans were purified after extensive digestion of specific glycoproteins, such as pineapple stem bromelain, bovine fibrin, and human IgG, and used as antigens in an IgE ELISA as well as in EAST and immunoblotting inhibition experiments. Dose-related histamine release was performed with BSA neoglycoproteins containing 3-4 units of the purified glycopeptides. RESULTS: Seven celery-allergic patients were identified who clearly presented IgE against the N-glycan purified from bromelain which is a common structure within the plant kingdom. Chemical defucosylation showed that alpha1, 3-fucose is a key **structure** for **IgE** binding. In patients with anti-CCD IgE, the maximal inhibition of celery EAST by the bromelain glycan ranged from 22 to 100%. Inhibition of celery immunoblots by preincubation of patient serum with this glycan led to a quenching of multiple bands at masses >40 kD. After linking the bromelain glycopeptide to BSA, a strong dose-related histamine release was obtained in a celery-allergic patient, occurring at lower concentrations than with the recombinant major protein allergen from celery, Api g 1. CONCLUSIONS: Our results demonstrate that IgE specific for CCD is common in celery-allergic patients, and can represent the major proportion of IgE against this food. alpha1, 3-fucose was confirmed to be an essential part of the IgE epitope. Immunoblotting inhibition indicated the presence of this carbohydrate determinant on multiple glycoproteins in celery extract. Although histamine release was only performed in 1 patient, our data show that proteins carrying multiple glycan units can be biologically active in patients sensitized to CCD.

L6 ANSWER 10 OF 105 MEDLINE DUPLICATE 5
AN 1999041940 MEDLINE
DN 99041940 PubMed ID: 9822645
TI Binding of anti-CD23 monoclonal antibody to the leucine zipper motif of FcepsilonRII/CD23 on B cell membrane promotes its proteolytic cleavage. Evidence for an effect on the oligomer/monomer equilibrium.
AU Munoz O; Brignone C; Grenier-Brossette N; Bonnefoy J Y; Cousin J L
CS INSERM U343, Hopital de l'Archet, B.P. 79, F-06202 Nice cedex 03, France.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, **(1998 Nov 27)** 273 (48) 31795-800.
Journal code: 2985121R. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199812
ED Entered STN: 19990115
Last Updated on STN: 19990115
Entered Medline: 19981223

AB In the present study we have compared the binding of two monoclonal antibodies to CD23, EBVCS1 and mAb25, which recognize the stalk and the lectin domain, respectively, on the CD23 molecule. At 4 degreesC, EBVCS1 binds to about 10% of the receptors recognized by mAb25 on the B cell surface. At 37 degreesC, whereas mAb25 reaches its maximal binding within a few seconds, EBVCS1 requires 60 min to bind to the same extent. Stabilization of the oligomeric **structure** of CD23 with **IgE** strongly affects in a dose-dependent fashion the number of binding sites seen by EBVCS1 but not the t1/2 to reach them, suggesting that EBVCS1 binds to the coiled coil region through an allosteric mechanism. EBVCS1 rapidly down-modulates the membrane CD23 expression with a coincident increase of CD23-soluble fragments in the culture medium, an effect that is inhibited by IgE. In contrast, mAb25, as well as IgE, protects CD23 from proteolytic cleavage and stimulates its endocytosis. These results suggest that EBVCS1 unravels the coiled coil structure of CD23, rendering it more susceptible to proteolytic attack. This supports the oligomeric model proposed previously (Gould, H., Sutton, B., Edmeades, R., and Beavil, A. (1991) Monogr. Allergy 29, 28-49). The biological significance of these observations is discussed.

```
=> D HIS

     (FILE 'HOME' ENTERED AT 14:16:33 ON 11 FEB 2003)

     FILE 'MEDLINE, BIOSIS' ENTERED AT 14:17:13 ON 11 FEB 2003
L1           217 S CRYSTAL? AND IGE
L2           188 S L1 AND PY<2001
L3           119 DUPLICATE REMOVE L2 (69 DUPLICATES REMOVED)
L4           224 S (CRYSTAL? OR STRUCTURE) (3A) IGE
L5           172 S L4 AND PY<2000
L6           105 DUPLICATE REMOVE L5 (67 DUPLICATES REMOVED)

=> S crystal? (3a) ige
L7            28 CRYSTAL? (3A) IGE

=> s l7 and py<2001
L8            21 L7 AND PY<2001

=> duplicate remove l8
DUPLICATE PREFERENCE IS 'MEDLINE, BIOSIS'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):n
PROCESSING COMPLETED FOR L8
L9             12 DUPLICATE REMOVE L8 (9 DUPLICATES REMOVED)

=> d 1-12 bib ab

L9   ANSWER 1 OF 12     MEDLINE                          DUPLICATE 1
AN   2001193532     MEDLINE
DN   21080851   PubMed ID: 11213224
TI   Piezoelectric quartz crystal based label-free analysis for allergy
     disease.
AU   Su X; Chew F T; Li S F
CS   Institute of Material Research and Engineering, Singapore, Singapore..
     xd-su@imre.org.sg
SO   BIOSENSORS AND BIOELECTRONICS, (2000) 15 (11-12) 629-39.
     Journal code: 9001289. ISSN: 0956-5663.
CY   England: United Kingdom
DT   Journal; Article; (JOURNAL ARTICLE)
LA   English
FS   Priority Journals
EM   200104
ED   Entered STN: 20010410
     Last Updated on STN: 20010410
```

Entered Medline: 20010405

AB This work presents a piezoelectric (Pz) quartz crystal based label-free quantification of total IgE and allergen-specific IgE in human sera for allergy testing. An evaluation of the different brands of crystals was first initiated with respect to variability in mass sensitivity, frequency measurement reliability and stability, and surface roughness. Thereafter, for total IgE quantification. a direct assay format was adopted. By means of thioctic acid (TA) and coupling reagents, anti-human IgE antibodies were immobilized on AT-cut Pz crystals (10 MHz). The modified **crystals** could detect serum **IgE** directly corresponding to a downward frequency shift. The results showed that silver-coated crystals as compared with their gold-coated counterparts provided approximately 1.5 times higher mass detection sensitivity for total IgE in the range of 5-300 IU/ml with a linear regression line, y = 1.8957 x + 1.5603, R2 = 0.995. For the detection of allergen-specific IgE, a sandwiched assay format was used. As the allergen-modified sensor surface captured various classes of associated antibodies (IgE, IgG, etc) and interfering serum proteins as well, the initial frequency shift downwards caused by sera sample incubation would not be proportional to specific IgE levels. Thus, following sample incubation, a second incubation step with secondary anti-human IgE was added to recognize IgE from other bound substances. The frequency shift after secondary antibody binding reflected the amount of allergen-specific IgE proportionally. Compared with 10 MHz crystals, the 20 MHz counterparts provided approximately four times higher mass detection sensitivity for allergen specific IgE in the range of 0.15-17.5 IU/ml with a linear regression line, y = 50.525 x + 107.777, R2 = 0.954. Total IgE and allergen specific IgE assay results of real patients' sera using the Pz sensors agreed well with those obtained by commercially available test kits with correlation coefficient 0.96-0.98. The possibility of regenerating the quartz crystals for further re-use was also dealt with.

L9 ANSWER 2 OF 12 MEDLINE DUPLICATE 2
AN 2000388698 MEDLINE
DN 20372188 PubMed ID: 10917520
TI Structure of the Fc fragment of human IgE bound to its high-affinity receptor Fc epsilonRI alpha.
AU Garman S C; Wurzburg B A; Tarchevskaya S S; Kinet J P; Jardetzky T S
CS Department of Biochemistry, Molecular Biology and Cell Biology, Northwestern University, Evanston, Illinois 60208, USA.
SO NATURE, **(2000 Jul 20)** 406 (6793) 259-66.
Journal code: 0410462. ISSN: 0028-0836.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS PDB-1F6A
EM 200008
ED Entered STN: 20000818
Last Updated on STN: 20000818
Entered Medline: 20000810

AB The initiation of immunoglobulin-E (IgE)-mediated allergic responses requires the binding of IgE antibody to its high-affinity receptor, Fc epsilonRI. Crosslinking of Fc epsilonRI initiates an intracellular signal transduction cascade that triggers the release of mediators of the allergic response. The interaction of the **crystallizable** fragment (Fc) of **IgE** (IgE-Fc) with Fc epsilonRI is a key recognition event of this process and involves the extracellular domains of the Fc epsilonRI alpha-chain. To understand the structural basis for this interaction, we have solved the crystal structure of the human IgE-Fc-Fc epsilonRI alpha complex to 3.5-A resolution. The crystal structure reveals that one receptor binds one dimeric IgE-Fc molecule asymmetrically through interactions at two sites, each involving one C epsilon3 domain of the IgE-Fc. The interaction of one receptor with the

IgE-Fc blocks the binding of a second receptor, and features of this interaction are conserved in other members of the Fc receptor family. The structure suggests new approaches to inhibiting the binding of IgE to Fc epsilonRI for the treatment of allergy and asthma.

L9 ANSWER 3 OF 12 MEDLINE DUPLICATE 3
AN 1999091053 MEDLINE
DN 99091053 PubMed ID: 9875849
TI Crystal structure of the human high-affinity IgE receptor.
AU Garman S C; Kinet J P; Jardetzky T S
CS Department of Biochemistry, Molecular Biology, and Cell Biology, Northwestern University, Evanston, Illinois 60208, USA.
NC AI-38972 (NIAID)
SO CELL, **(1998 Dec 23)** 95 (7) 951-61.
Journal code: 0413066. ISSN: 0092-8674.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199901
ED Entered STN: 19990202
Last Updated on STN: 19990202
Entered Medline: 19990119
AB Allergic responses result from the activation of mast cells by the human high-affinity IgE receptor. IgE-mediated allergic reactions may develop to a variety of environmental compounds, but the initiation of a response requires the binding of IgE to its high-affinity receptor. We have solved the X-ray crystal structure of the antibody-binding domains of the human IgE receptor at 2.4 A resolution. The structure reveals a highly bent arrangement of immunoglobulin domains that form an extended convex surface of interaction with IgE. A prominent loop that confers specificity for IgE molecules extends from the receptor surface near an unusual arrangement of four exposed tryptophans. The **crystal** structure of the **IgE** receptor provides a foundation for the development of new therapeutic approaches to allergy treatment.

L9 ANSWER 4 OF 12 MEDLINE DUPLICATE 4
AN 97169442 MEDLINE
DN 97169442 PubMed ID: 9016715
TI The molecular basis for allergen cross-reactivity: **crystal** structure and **IgE**-epitope mapping of birch pollen profilin.
AU Fedorov A A; Ball T; Mahoney N M; Valenta R; Almo S C
CS Department of Biochemistry, Albert Einstein College of Medicine, Bronx, NY 10461, USA.
NC GM53807 (NIGMS)
SO STRUCTURE, **(1997 Jan 15)** 5 (1) 33-45.
Journal code: 9418985. ISSN: 0969-2126.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS PDB-1CQA
EM 199702
ED Entered STN: 19970306
Last Updated on STN: 19970306
Entered Medline: 19970227
AB BACKGROUND: The profilins are a group of ubiquitous actin monomer binding proteins that are responsible for regulating the normal distribution of filamentous actin networks in eukaryotic cells. Profilins also bind polyphosphoinositides, which can disrupt the profilin-action complex, and proline-rich ligands which localize profilin to sites requiring extensive actin filament accumulation. Profilins represent cross-reactive allergens for almost 20 % of all pollen allergic patients. RESULTS: We report the X-ray crystal structure of birch pollen profilin (BPP) at 2.4 resolution.

The major IgE-reactive epitopes have been mapped and were found to cluster on the N- and C-terminal alpha helices and a segment of the protein containing two strands of the beta sheet. The overall fold of this protein is similar to that of the mammalian and amoeba profilins, however, there is a significant change in the orientation of the N-terminal alpha helix in BPP. This change in orientation alters the topography of a hydrophobic patch on the surface of the molecule, which is thought to be involved in the binding of proline-rich ligands. CONCLUSIONS: Profilin has been identified as an important cross-reactive allergen for patients suffering from multivalent type I allergy. The prevalent epitopic areas are located in regions with conserved sequence and secondary structure and overlap the binding sites for natural profilin ligands, indicating that the native ligand-free profilin acts as the original cross-sensitizing agent. Structural homology indicates that the basic features of the G actin-profilin interaction are conserved in all eukaryotic organisms, but suggests that mechanistic differences in the binding of proline-rich ligands may exist. The structure of BPP provides a molecular basis for understanding allergen cross-reactivity.

L9 ANSWER 5 OF 12 MEDLINE DUPLICATE 5
AN 96181524 MEDLINE
DN 96181524 PubMed ID: 8610159
TI The crystal structure of human glycosylation-inhibiting factor is a trimeric barrel with three 6-stranded beta-sheets.
AU Kato Y; Muto T; Tomura T; Tsumura H; Watarai H; Mikayama T; Ishizaka K; Kuroki R
CS Central Laboratories for Key Technology, Kirin Brewery Company, Ltd., Yokohama, Japan.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, **(1996 Apr 2)** 93 (7) 3007-10.
Journal code: 7505876. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199605
ED Entered STN: 19960605
Last Updated on STN: 20000303
Entered Medline: 19960524
AB Glycosylation-inhibiting factor (GIF) is a cytokine that is involved in the regulation of **IgE** synthesis. The **crystal** structure of recombinant human GIF was determined by the multiple isomorphous replacement method. The structure was refined to an R factor of 0.168 at 1.9 angstrom resolution. The overall structure is seen to consist of three interconnected subunits forming a barrel with three 6-stranded beta-sheets on the inside and six alpha-helices on the outside. There is a 5-angstrom-diameter "hole" through the middle of the barrel. The barrel structure of GIF in part resembles other "trefoil" cytokines such as interleukin 1 and fibroblast growth factor. Each subunit has a new class of alpha + beta sandwich structure consisting of two beta-alpha-beta motifs. These beta-alpha-beta motifs are related by a pseudo-twofold axis and resemble both interleukin 8 and the peptide binding domain of major histocompatibility complex protein, although the topology of the polypeptide chain is quite different.

L9 ANSWER 6 OF 12 MEDLINE DUPLICATE 6
AN 96229913 MEDLINE
DN 96229913 PubMed ID: 8639672
TI Isomerization of an aspartic acid residue in the complementarity-determining regions of a recombinant antibody to human IgE: identification and effect on binding affinity.
AU Cacia J; Keck R; Presta L G; Frenz J
CS Department of Manufacturing Sciences, Genentech Inc., South San Francisco, California 94080, USA.

SO BIOCHEMISTRY, **(1996 Feb 13)** 35 (6) 1897-903.
Journal code: 0370623. ISSN: 0006-2960.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199607
ED Entered STN: 19960726
Last Updated on STN: 19960726
Entered Medline: 19960717
AB This report describes the effect on antigen binding of an isomerized aspartate residue located in the complementarity-determining regions (CDRs) of a recombinant monoclonal antibody. The antibody, which binds human IgE, contains two Asp-Gly sequences within its CDRs, but only one site was found to be labile to isomerization. Isolation and characterization of antibody fragments differing in the labile sequence were facilitated by using a technique involving hydrophobic interaction chromatography (HIC) that separates aspartyl, isoaspartyl, and cyclic imide variants to the residue located in CDR-L1. The variants were isolated for structural characterization and for determination of their relative antigen binding affinities. Mutants were constructed with altered residues to obviate the effects of isomerization and were evaluated for their ability to bind to **IgE**. Inspection of published **crystal** structures of CDRs of antibodies indicated that hydrogen binding of the Asp side chain of the unreactive residue may be the constraint that prevents isomerization. The strategy outlined here may prove to be of general utility in the biochemical and immunochemical characterization of recombinant antibodies.

L9 ANSWER 7 OF 12 MEDLINE
AN 95067282 MEDLINE
DN 95067282 PubMed ID: 7976733
TI Characterization of the human IgE Fc-Fc epsilon RI alpha interaction.
AU Kochan J P; Mallamaci M; Gilfillan A; Madison V; Basu M
CS Department of Bronchopulmonary Research, Hoffmann-La Roche Inc., Nutley, NJ 07110.
SO ADVANCES IN EXPERIMENTAL MEDICINE AND BIOLOGY, **(1994)** 347 31-8.
Journal code: 0121103. ISSN: 0065-2598.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199412
ED Entered STN: 19950110
Last Updated on STN: 19950110
Entered Medline: 19941227
AB A significant amount of progress has been achieved on characterizing the interaction of the IgE Fc molecule with the Fc epsilon RI alpha. However, there is yet no definitive structural information which precisely defines the nature of this interaction. It is clear that this information will only be provided by the resolution of the X-ray **crystallographic** structures of the **IgE** Fc molecule, the Fc epsilon RI alpha subunit extracellular domain, and the IgE Fc-Fc epsilon RI alpha complex. It is anticipated that these structures will be determined in the near future, and that they may provide some insight into the development of potential therapeutics effective in the management of IgE-mediated allergic diseases.

L9 ANSWER 8 OF 12 MEDLINE DUPLICATE 7
AN 91292772 MEDLINE
DN 91292772 PubMed ID: 2065512
TI Cholesterol **crystals** and **IgE**-containing immune complexes in rheumatoid pericarditis.
AU Van Offel J F; De Clerck L S; Kersschot I E

CS Department of Rheumatology, Sint-Vincentius Hospital, Antwerp, Belgium.
SO CLINICAL RHEUMATOLOGY, **(1991 Mar)** 10 (1) 78-80.
Journal code: 8211469. ISSN: 0770-3198.
CY Belgium
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199108
ED Entered STN: 19910901
Last Updated on STN: 19910901
Entered Medline: 19910815
AB A 72-year-old rheumatoid arthritis patient is described presenting with acute dyspnoea and peripheral oedema. A pericardial effusion with signs of tamponade was diagnosed. Examination of the pericardial fluid revealed the presence of cholesterol **crystals** and **IgE**-containing immune complexes. The significance of these findings in the differential diagnosis of pericardial disease is discussed.

L9 ANSWER 9 OF 12 MEDLINE DUPLICATE 8
AN 87241309 MEDLINE
DN 87241309 PubMed ID: 3593243
TI Self-organization of IgE immunoglobulins on phospholipid films.
AU Uzgiris E E
SO BIOCHEMICAL JOURNAL, **(1987 Feb 15)** 242 (1) 293-6.
Journal code: 2984726R. ISSN: 0264-6021.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198707
ED Entered STN: 19900305
Last Updated on STN: 19900305
Entered Medline: 19870716
AB Mouse monoclonal IgE anti-2,6-dinitrophenyl antibody (clone SPE-7) crystallizes in two dimensions when bound to a phospholipid monolayer or bilayer that has been combined with the hapten 2,6-dinitrophenyl groups. The two-dimensional lattice exhibits considerable local disorder, but long-range order is maintained over many unit cells of the lattice. The **crystallization** of **IgE** on the films is sensitive to IgE concentration in bulk solution. The optimum appears to be in the range 100-200 micrograms/ml. The crystallization tendency is diminished at pH lower than pH 6.5, and the crystals 'melt out' at a rather low temperature; no crystals were observed for 37 degrees C and above. The crystal growth rate is very much lower than was observed for monoclonal IgG1 anti-2,6-dinitrophenyl antibody. Finally, the IgE lattice is very different from the two-dimensional lattice formed by IgG1: the hexagonal lattice unit cell is smaller and has an open structure.

L9 ANSWER 10 OF 12 MEDLINE
AN 86130569 MEDLINE
DN 86130569 PubMed ID: 3947352
TI Supported phospholipid bilayers for two-dimensional protein crystallization.
AU Uzgiris E E
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, **(1986 Jan 29)** 134 (2) 819-26.
Journal code: 0372516. ISSN: 0006-291X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198603
ED Entered STN: 19900321
Last Updated on STN: 19900321

Entered Medline: 19860324

AB Phospholipid bilayers, supported on UV irradiated carbon shadowed nitrocellulose electron microscope grids, have been used to induce two-dimensional **crystal** growth of **IgE** and IgG anti-DNP monoclonal antibodies. The UV irradiation renders the grids hydrophilic in a very uniform fashion and allows for the transfer of phospholipid monolayers from an air/water interface in a sequential dipping procedure. The surface coverage achieved was nearly 100% as measured by antibody binding and by the formation of protein arrays on the bilayer covered grids. The supported bilayers appear to be stably held and are appropriate for slow binding conditions and long incubation times with low concentrations of binding protein.

L9 ANSWER 11 OF 12 MEDLINE DUPLICATE 9
AN 86086156 MEDLINE
DN 86086156 PubMed ID: 4077931
TI Antibody crystallization on phospholipid films: dynamics and the effects of antibody conformation.
AU Uzgiris E E
SO JOURNAL OF CELLULAR BIOCHEMISTRY, **(1985)** 29 (3) 239-51.
Journal code: 8205768. ISSN: 0730-2312.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198602
ED Entered STN: 19900321
Last Updated on STN: 19900321
Entered Medline: 19860219

AB Monoclonal antibodies from two-dimensional (2-D) crystals when bound to haptenated phospholipid monolayers in physiological conditions and at ambient temperatures. IgG1 forms two crystal phases: a linear strand phase and a high-order hexagonal phase. The relative distribution of these two phases is dependent on temperature, pH, and salt concentration. This dependence is one that is associated with protein intramolecular interactions rather than lipid-lipid or lipid-protein interactions for a number of reasons: 1) Polyclonal antibodies against the hapten DNP do not organize into any crystal structure for any of the experimental conditions used. 2) Slightly denatured IgG (through storage at 4 degrees C, for example) does not readily crystallize and a shift in the temperature dependence for forming the hexagonal phase is observed. 3) There is no pH driven transition in **crystallization** tendency for **IgE** anti-DNP but a transition to disorder is observed at above 30 degrees C. No such transition exists for IgG1. Observation of the dynamics of crystal growth shows a clear and marked dependence on pH and temperature that is in accord with the results of long-term incubations. It is found that high pH retards crystal growth very significantly for IgG1 but not for **IgE**. Also, the **crystal** growth rate of 4 degrees C-stored IgG1 is greatly reduced over fresh IgG1 (-80 degrees C stored). Furthermore, it is found that the linear phase of IgG1 is an extremely rapidly forming phase but one that is metastable against the hexagonal phase.

L9 ANSWER 12 OF 12 MEDLINE
AN 83212113 MEDLINE
DN 83212113 PubMed ID: 6303964
TI Adjuvant effects of a **crystalline** silica on **IgE** and IgG1 antibody production in mice and their prevention by the macrophage stabilizer poly-2-vinylpyridine N-oxide.
AU Mancino D; Buono G; Cusano M; Minucci M
SO INTERNATIONAL ARCHIVES OF ALLERGY AND APPLIED IMMUNOLOGY, **(1983)** 71 (3) 279-81.
Journal code: 0404561. ISSN: 0020-5915.
CY Switzerland

DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198307
ED Entered STN: 19900319
Last Updated on STN: 19900319
Entered Medline: 19830708
AB A crystalline silica (standard quartz DQ12 with particle size less than 5 microns) is able to stimulate in Balb/c mice the production of IgE and IgG1 antibody to a single 1-microgram dose of ovalbumin. The adjuvant effects of silica on both IgE and IgG1 antibody production are prevented by pretreatment of animals with poly-2-vinylpyridine N-oxide, a polymer that protects macrophages from the well-documented toxic effects of silica. These results indicate that adjuvanticity of silica is, at least partly, correlated to the damage induced on macrophages.

=>

---Logging off of STN---

=>
Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	32.86	33.07

STN INTERNATIONAL LOGOFF AT 14:29:06 ON 11 FEB 2003